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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Shih-Jong J. Lee

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EXAMINER

MOTSINGER, SEAN T

ART UNIT

PAPER NUMBER

2624

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DELIVERY MODE

04/01/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/828,629	<b>Applicant(s)</b> LEE ET AL.	
	<b>Examiner</b> SEAN MOTSINGER	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 19-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

***Response to Applicants Arguments/Amendments***

Applicants arguments/amendments filed on 12/22/2009 have been entered and are considered below.

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

***Rejections Under 35 U.S.C. 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-18 are rejected under 35 U.S.C. 101 because the process is not tied to another statutory category. A process claim, to be statutory under § 101, must pass the machine-or-transformation test, which ensures that the process is limited to a particular practical application. Thus, not every claimed method qualifies as a statutory process. The test ensures that the process is not simply claiming an abstract idea, a mental process or substantially all practical uses of (preempting) a law of nature or a natural phenomenon. This process does not perform any physical transformation because it is merely manipulating data; and furthermore it is not tied to a particular machine. The claim as it stands is not implicitly tied to a machine because of the steps of claim 1 for example could be performed entirely by a mental process. Mental processes are not

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statutory. To rectify this, the examiner suggest applicant amend the claim to limit the claim to require that the process be performed on a specific machine such as a computer processor with appropriate programming to perform the method. Note the use of the particular machine or transformation of the particular article must impose a meaningful limit on the claim's scope, therefore the examiner suggest tying at least step b or c to a particular machine.

### ***Rejections Under 35 U.S.C. 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 recites "performing automation control of the relational feature development step and the relational feature analysis step using a recipe". This is still unclear what this means, the examiner suggests the language "wherein the relational feature development step and the relational feature analysis step are automated via a recipe"

***Rejections Under 35 U.S.C. 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2, 4, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Yaung et al US 6512850.

Re claim 1 Yang discloses A method for the detection and analysis of patterns comprises the steps of: a) Input an image containing object labels ( object set column 6 lines 20-25); b) Perform relational feature development using the input image to create at least one pattern map output (Similarity matrix column 6 lines 25-35) wherein the pattern map consists of CxC object class relationships (MxM matrix column 6 lines 35-44 note that the full MXM matix is not showin in figure 6 but the fully MXM matrix may be created computing all the redundant similarity values ) across an image set, each row of the pattern map is a distribution of object classes (objects column 6 lines 20-25 note each object could be considered its own class) relations to C other classes including itself (column 6 lines 28-50 note the similarity values are calculate between the other objects and itself); c) Perform relational feature analysis (cluster table column

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6 lines 50-55) using the at least one pattern map to create a relational feature analysis result output (cluster table column 6 lines 50-55).

Re claim 2 Yang discloses further performing automation control of the relational feature development step and the relational feature analysis step using a recipe (software code column 4 lines 55-67).

Re claim 4 Yang discloses wherein the relational feature analysis method selects from the set consisting of: Pattern map viewing; pattern map operation (associated image object identifiers into clusters see figure 4 step 412).

Re claim 17 The relational feature analysis method of claim 4 wherein the Pattern Map Viewing selects from the set consisting of: a) Color coded map, b) Bar chart, c) Histogram, d) Image montage (note this feature is not required in the claim since only one of pattern map view and pattern map operation need to be performed since pattern map operation was already shown this feature need not be shown to meet the claim).

Re claim 18 The pattern detection and analysis method of claim 2 wherein the recipe for automation control is selected from the set consisting of: a) Image loading

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recipe, b) Feature table production recipe, c) Pattern Map creation recipe (code for similarity matrix generator column 4 lines 55-67), d) PatternMap update and integration recipe, e) PatternMap operations recipe, f) Output recipe.

### ***Allowable Subject Matter***

Claims 3, 5-16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 101, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The prior art does not include the combination of the following “wherein the relational feature development method further comprises the steps of: a) Perform core measurement table development using the input image to create at least one core measurement table output; b) Perform feature table production using the at least one core measurement table to create at least one feature table output; c) Perform PatternMap creation using the at least one feature table to create a PatternMap output.” Therefore claim 5 and its dependents contain allowable subject matter. Claim 3 contains allowable subject matter because the prior art of record does not disclose using a pattern map as described in claims 1 to detect a genetic anomaly.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN MOTSINGER whose telephone number is (571)270-1237. The examiner can normally be reached on 9-5 M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Motsinger  
3/27/2010

/Brian P. Werner/  
Primary Examiner, Art Unit 2624